

# MAKING WIRELESS OPERATORS OUT OF SAILORS AT THE BROOKLYN NAVY YARD

An Electrical Class That Has Turned Out Hundreds of Graduates to Meet the Growing Importance of Electricity on Warships



A CLASS IN WIRELESS TELEGRAPHY.

As an indispensable man in the navy the electrician has made a place for himself second only to that of the chief gunner. Or, to be more accurate, the place has been made for him by the developments of the last eight years, and the Government has established a school to make a thousand or more of its sailors competent for the new work.

Incidentally, these men are acquiring an education and training which will solve for them the problem of making a good living when they quit the service. The result, of course, is merely a sort of by-product in which the Navy Department is not directly interested.

There is no longer cause for that old complaint that service in the navy doesn't fit a boy for anything else and may unfit him for everything else. Let him go into the electrical corps, if he is studious and ambitious enough for the work, and when he quits the ships there will be half a dozen big corporations trying to get his services.

To illustrate, there is a chief electrician; a petty officer in the navy, now at work as an instructor in the wireless telegraph department of the school for electricians at the Brooklyn yard who has had an offer of \$300 a month from one of the wireless companies that have their headquarters in this city. That is more than the pay of a Captain in the navy. As it is the chief electrician gets a month and, of course, couldn't go to the outside job before his time is up without being a deserter.

There is another way of looking at it. This boy knew nothing about electricity and wireless telegraphy before he entered the navy. The Government has given him his first training and a comprehensive knowledge of all the various wireless systems which he could not have got anywhere else. He is learning a profession as thoroughly as if he were in an expensive technological school and getting a living, with the health and fun and experience that can't be got by the handbooks thrown in.

Furthermore, this boy and others like him are qualified by their achievements in electricity to go to the gunnery school and through that institution, eventually, to become commissioned officers. So they have two careers opened to them—progress toward high rank in the navy or success in civil life—and in either case they will

have the Government and the department's electrical school at the Brooklyn navy yard to thank for their success. This school began in the smallest sort of way soon after the Spanish war, when a few apprentices were set to work in the various shops to learn something about dynamo. Before that time electricity wasn't much of a factor on the warships. The guns and turrets and hoists were all operated by steam or hydraulic power.

Nowadays electricity is depended on for almost everything aboard ship, except turning the screws, and practically all of the Government vessels, not even excepting the small torpedo boats, are equipped with their wireless telegraph plants. Guns are pointed and fired by electric power, rammers are driven home by it, turrets are moved by it and the ammunition is hoisted by pressing a button.

The steering gear, of course, is electric, and so is the mechanism for hoisting the small boats. Dynamos furnish the power for coaling ship which accounts for the speed acquired in the United States Navy recently in filling the bunkers.

Neither ordinary nor able seamen can do all these things unless they have special training; hence the school at the Brooklyn yard, under the direction of Capt. Emory of the receiving ship Hancock and under the immediate supervision of Lieutenant-Commander J. F. Hubbard, who selects the boys for the course according to their preliminary promise of fitness, and then sees to it that they either keep up to the mark for six months of hard study and investigation or else get out to make room for others.

The class consists of anywhere from 30 to 100 men at a time and there is no difficulty in keeping it filled. Of the 35,000 enlisted men now in the navy there are about 1,000 who are graduates of the electrical school. Some of them finished their course before wireless telegraphy was added to the curriculum, and they have had themselves transferred to the navy yard so that they might take a post-graduate course in wireless.

It has been estimated by the Bureau of Equipment and other naval authorities that at least 5 per cent. of the crew of each ship should be electricians, so the total

number of graduates is not yet quite as great as desired by the department. When the new battleship Connecticut, for instance, goes into commission she will have a crew of 1,000 men. Forty will be trained electricians. She should have fifty.

Of the ninety men now in the school nearly all enlisted from Western States; but that only happened so, explained Lieut. Hubbard, who said that the recruiting officers had for the time being cleaned up about all the desirable naval material on the Atlantic coast and that for a while the best supply would come from the interior. It is from the best supply that the candidates for the electrical corps are drawn.

A new sailor who wants to try for that corps and can convince Capt. Emory or Lieut. Hubbard that he has had some electrical training or has some natural qualifications for the work is allowed to enlist again in the lowest three grades in the navy, those of landsman, ordinary seaman and seaman, and, of course, gets rid of some drudgery in the work aboard ship; but he also misses some of the advantages of those three grades, at which the novice at seagoing learns a lot about taking care of himself and about the work of a sailor pure and simple.

When these third class electricians go to sea they are experts, trained not only in operating all the electrical machinery aboard ship, but able to take it to pieces and set it up again and make necessary repairs. Of course, every man aboard ship dabbles a little in electricity—he can't help it, because a current and he is bound to absorb a little of the man from the school at the Brooklyn yard who is used in an emergency.

All of the teaching is of necessity individual, rather than in classes. This is so because of the wide range of qualifications among the beginners. On the same day, for instance, the naval class may receive a boy who has had thorough theoretical training in a school of technology but no practical experience, and another boy who has been earning a living at dynamo tending but, so far as book learning goes, couldn't work out simple fractions. Both are valuable, but require different treatment.



CHIEF ELECTRICIANS CHEVROIS

The boy from the school of technology, after passing an examination and proving that he really knows what he has said he knew, is set at work on the machinery to apply his theories. The other beginner is put in a corner on the second floor of the equipment building with a dozen more pupils to learn from text books the whys and wherefores of the machinery they have become familiar with.

These two boys may not meet till near the end of their course, they come together in the wireless telegraph room when they will learn to send and receive on all the various foreign and American instruments that have been invented, and, furthermore, learn how to duplicate those outfits and to explain every detail of them in writing and with diagrams. Absolute thoroughness, both practical and theoretical, is the most striking characteristic of the school.

Applicants received in the class also include boys who have acquired a taste for electricity from their jobs at stringing wires on poles and have coupled with that the old romantic longing to go to sea, which even the age of electricity hasn't been able to quell in normal healthy youngsters. Then there are older men who are qualified electrical engineers who want to go to sea, or want to study more and can't afford to pay tuition. Western Union operators and railroad telegraphers who are tired of office work are also among the recruits.

The school, which has grown from a little nucleus of sailors about a dynamo which

belonged to another department altogether to a recognized institution at the navy yard, now has three big rooms for its exclusive use in one of the equipment bureau's buildings. On the ground floor is the machine shop and dynamo room, and it is here that the sailor, except in cases requiring special treatment, begins his course.

Here he learns, first, how to run everything electrical and, secondly, how to make and repair whole machines or their parts. He becomes an expert with a lathe and learns how to wind an armature.

An old dynamo which had been abandoned for junk was sent up from the Norfolk Navy Yard the other day and found its way into the electrical school. The sailors' class was turned loose on it and in two days had that dynamo in working order.

The sets of a French wireless system which were tried with the Government's consent at Sandy Hook failed to get any communication whatever with incoming ships. The layout was sent to the Brooklyn navy yard for storage, and there the wireless students of the navy tackled it and succeeded in putting it in communication, something that the French operators who had brought the apparatus over to this country had failed to do.

There is also, in the dynamo and lathe room, a complete layout of switchboards, indicators and outcuits, with their connections, with all the lights, whistles, bells and gear that are operated by electricity on a battleship. Searchlights are a special subject of investigation by the students, and

so are the truck and mast headlights with the electric pulsters, essential for the safety signals when vessels are maneuvering in squadron formation.

All the work in this department is done with reference to the text books. Each sailor must be ready to explain why, at any moment, such a thing is so and must keep a record of his day's work in his log. Above the dynamo room is another room, fully as large, filled with charts and diagrams of wireless telegraph systems. These blue prints, supplemented in pen and ink sketches, show the whole thing from the power creating dynamo to the aerial, where the message is received from or sent into the ether. The work in this room consists principally of investigating the dozen or more systems, studying the cleverly made wireless telegraphs of some commercial benefit, and learning the code. This part of the course develops the sailor as a draughtsman.

The code adopted in the school is the Morse Continental. At the outset of the introduction of wireless into the navy the Department tried and adopted some modification of the regular naval code which is used in the light and flag wigwagging signals, but it was too slow. With the Morse Continental code for the wireless talk between ships secrecy can be secured without sacrificing speed in communication by the simple trick of shifting all the letters one place to the right or left.

For instance, the commander of one squadron can, by preliminary agreement, make

his A stand for B, then B will be C and C will be D, and so on all through the alphabet. For a month's operation A could be B on the first day of the month and A could be C on the second day, D on the third and so on throughout the month, the rest of the alphabet pushing ahead one place every day in accord with the movements of A. It would be impossible for the operator on a hostile ship to read the code even if he stole the messages.

For all that, the naval authorities are skeptical about the utility of the wireless telegraph in war times, not because of any lack of secrecy, but because of the confusion caused by two or more systems. Marconi has asserted that he could time his instruments so that they would not be affected in any way by the operation of other systems, but he has not succeeded in doing that yet, and some naval officers don't think that the thing can be done.

"That is the weak point in wireless," said an officer when at the Brooklyn yard the other day, "and there is little chance of its being eliminated. As a matter of fact all the wireless communication about this port is carried on by courtesy and sufferance."

"Any operator employed by any one of the half dozen companies can throw out all the rest by simply keeping his key going constantly and not giving the others a chance. As it is each operator listens, and when no messages are in the air tries to send what he has on hand. Then he waits awhile to give some one else a chance."

Eventually there will have to be Government supervision to control the business at a port like New York. Any one with \$200 to spend could put up an aerial and a battery over here in Brooklyn and put everybody out of business.

"That's what happened a while ago at Newport," when an ambitious boy who wanted to be an electrician put up a pole and connected it with a battery out of an old automobile. For a week the Government operators at Newport couldn't send or receive a message that could be read.

"Then they investigated and found the boy, who was ignorant of the trouble he had caused."

That boy is now a student in the electrical school at the Brooklyn yard, and he is expected to be a useful man in the navy. There has been complaint that the State of Liberty in the upper bay interfered with wireless messages, but that is not so; say the naval operators. They do complain, however, of the trolley cars on the Brooklyn Bridge. Every time the little wheel on the end of a car's trolley pole begins to sizzle and spit green sparks the boys who are learning to send and receive in the navy are learning to send a string of meaningless flashes from their aerial on top of the equipment building.

The new petty officer's emblem designed for the blouse sleeve of the sailor who becomes chief electrician consists of three red bars and a white globe encircled by lines, which, the wearer explains, indicate electric currents.

## A RINGER IN A POKER GAME

Mistake of Two Professional Gamblers on a Mississippi River Packet.

"In them old times days you was askin' about," said Caleb Mix, the veteran bartender on the Mississippi River Packet City of Natchez, "there was a tellable clear notion as how the gamblers that travelled the boats—an' there was a mazy on 'em as did—al' knowed one another, an' more'n that, as how they al' stood in together when there was any suckers to be did up."

"I ain't a-sayin' but what there was some close to bein' correct. They was a heap like a pack o' wild dogs, an' when there was a sheep to be pulled down, they just naturally ran together. It were only when they wa'n't no sleep in sight 't the dogs 'd eat one another."

"There was times, though, when there was some confusion, bein' as how some p'fessional 'd happen along 'thouten any previous introduction. Jest naturally he'd hold himself up fr a sucker, reck'nin' on turnin' the game ag'in 't other p'fessionals afore they'd tumble."

"There was one on 'em that come to be known as Harry Bixby after 't come aboard the old Bayou Belle at Vicksburg one night an' stirred up more hell inside o' the first five hours 'n there had been on the boat fr a year afore."

"He was a tall, fine lookin' chap with jet black hair an' eyes, an' his eyes snapped like firecrackers when he looked at you sudden. He was dressed elegant, but that wa'n't no sure sign. Some o' the p'fessionals used to dress as fine as the richest swell in the bull valley, an' the gentlemen used to wear nigh as much jewelry as the gamblers did. So 'twas 'n none surprisin' to see the long gold chain he had around his neck, nor the big diamond stud he had in his shirt. His clo'es was black broadcloth, an' his linen was the finest."

"He played his part al' right. After supper he went out on the upper deck and walked up an' down, dignified as you please, smokin' his cigar an' not speakin' to nobody till Jim Robinson come up to him an' askt him if he'd care to take a hand in a little game o' draw poker 't some o' the passengers was a-tryin' to get up to pass away the time."

Robinson and his side partner, Joe Keeler, was travelin' strictly on business, their business bein' draw poker, an' they was the passengers 'twas tryin' to get up

the game, but there wasn't no explanations 't for. Likely there wa'n't none needed, so far as Bixby was concerned. "Peared like he was some ruffled at a stranger takin' the liberty o' talkin' to him, but after he'd looked at 'em, an' looked at Robinson, an' 'doubtful, he answered him some haughty, an' said he 'loved be mought as well set an' play, as to walk round alone on the deck."

"Keeler had catcoted two travellin' men fr'm the North, 't peared to look on Mississippi River poker like it was a kindergarten diversion, an' they had a five handed game right away."

"Poker was quite some different then fr'm 'tis 'n now, but you don't want to make no mistake. There was them 't made a study of it them days, same as there had been since, an' they was sure scientific. I reckon there wa'n't never been three better players 'n this Bixby an' Robinson an' Keeler, but, o' course, there's modern tricks 't they didn't know nothin' about, an' some o' the things they did know wouldn't go to-day with second rate gamblers."

"Frinstance, Bixby was the first man I ever seen deal himself a card outen the middle o' the deck. I was a-watchin' him, bein' some suspicious owin' to him bein' so al-fired cool when Robinson an' Keeler 'd reckon 't he was pullin' the strings, an' 'twas 'n none surprisin' 't the other two didn't notice, them bein' 'Notherners, but 'peared to me like a Southern gentleman had ought to know enough about poker to know a p'fessional when he played with him."

"So I watched Bixby some close, an' I seen 't'able soon 't he likely know'd as much as anybody was goin' to show him about draw poker. He was al' right, but that card fr'm the middle o' the deck, 'Well, just naturally you couldn't ha' drove me away with guns after that."

"Mebbe it mought ha' been half an hour after the game started when one o' them travellin' men caught a pat flush on Keeler's deal. It were his pal's ante, an' he come in, o' course, but havin' some sense even if he was a 'Notherner, he didn't raise, settin' where he did."

"Robinson stayed and Bixby laid down, bein' the winner's say, an' he was 't ten dollars, there bein' five in the pot up to that. They was playin' a dollar ante, calls two."

"The minute man he skint his cards careful, an' findin' nothin' much, figgered 't there wa'n't no puttin' in eleven dollars more just 'cause he had one dollar in 's ready, so he folded."

"Just naturally the man with the flush was easy in his mind. He seen the ten raise an' made it ten more."

"Bixby looked at both on 'em 't'able sharp afore he lifted his cards, but when he'd seen 'em he throwed in two hundred an' fifty, makin' a raise o' two hundred."

"It was too strong for Keeler an' he throwed down his cards, but Robinson says: 'I'll see that an' go you five hundred more.'"

"Bixby never quivered."

"Suits me," says the 'Notherner, quite gay, an' he seen the twenty an' put in fifty more."

"Then, o' course, it was up to Robinson to look anxious, but after a couple o' minutes, he says, 'I ain't goin' to be drove out no more.'"

"Well, Keeler, he studied again, like he was almighty puzzled, but finally he just made good, an' picked up the deck to serve the draw, but if he was he was a little drunk."

"O' course, the 'Notherner he stood pat. Robinson took one card an' Keeler took two, just naturally 't looked for to see four in Keeler's hand if it come to a show-down, but I was wrong. What he had was a full."

"I must say that 'Notherner knowed some poker. He bet a white chip, an' Robinson seen it. 'Twasn't time fr him to drop yet. So Keeler he bet a hundred 't 'Notherner an' 't was a little more in front of him, but he'd been diggin' once or twice afore an' we all thought he had no more money. He went through his clo'es 't'able, an' pulled out thirty-five more, an' says: 'I'll call fr that. It's all I have.'"

"Well, o' course Robinson didn't have no call to play no more, so he dropped an' Keeler showed his full. That put the man with the flush out o' the game an' him an' his pal looked at one another. It was almighty good 't'able 't Robinson looked at his cards, but I reckon his pal had a short wad, so the two on 'em got up."

"Now," says Bixby, as cool as a chunk o' ice, when them two quit, 'now we'll have a game fr blood.'"

"An' he pulled a large wad outen his pocket an' put it on the table. The others looked at him kind o' surprised, an' Keeler didn't say nothin', but Robinson says, 'Oh, very well, as cool as Bixby, an' pickin' up the deck he dealt the next hand."

"Bixby put up a five dollar ante, callin' ten, but nobody made no objection and when Keeler'd looked at his cards he come in. Robinson made it ten more, an' Bixby made good 't'able 't Robinson was al' right. It were rather a curious 't'able, but an' Keeler looked at him 't'able sharp, like he was thinkin' o' raisin' it again afore the draw, but if he was he was a little drunk."

"That made sixty in the pot afore the draw, wad he look like it wa'n't fr blood, sure enough, but they was al' as calm as if 'twas 60 cents. Bixby he skint his cards down, deliberate, an' called fr two. Keeler took three an' Robinson one."

"Peared like Keeler'd bettered, for he throwed in a fifty as soon as he seen his cards. Just naturally he wa'n't skinted sharp afore he lifted his cards, but when he'd seen 'em he throwed in two hundred an' fifty, makin' a raise o' two hundred."

"It was too strong for Keeler an' he throwed down his cards, but Robinson says: 'I'll see that an' go you five hundred more.'"

"Bixby never quivered."

"A thousand better than you," he says, an' 't'able 't he can't give hisself a card fr'm the bottom 't'able 't seen, an' don't know the deck no better'n to give another man four tens, is a monstrous poor dealer. 'Peared like he ha'n't got no call to play in a grown man's game."

"He kept his eyes dancin' fr'm one to the other an' his guns both p'inted steady fr a minute, an' then he said: 'I reckon you don't want to fight. You've had your lesson, an' I don't think you want to play no more with me. How if we have a bottle o' wine? Bring a bottle an' three glasses, Cale. The gentlemen are going to drink with me to a better acquaintance.'"

"An' that's what they did. Keeler an' Robinson wa'n't no chumps, if they wa'n't in the same class with Bixby in poker. They knowed when they'd had enough an' they spent the rest o' the evening drinkin' wine. More'n that, they was al'ways good friends afterwards 't a fur 't I know."

"If they had any such notion they got over it sudden, fr Bixby took it up quick. I was tellin' you how his eyes snapped. 'Peared like you o' fair hear 'em crack when he said: 'I did look queer, for a fact. You must remember, when I saw him take that third ace fr'm the bottom of the deck, I was tellin' you how his eyes snapped. Hold on, there! Hands up!'

"They'd both started up an' was pullin' their guns when Bixby flashed one in each hand, an' he said: 'You see, I've got 'em. Keep quiet a minute, please,' says Bixby. 'It's bad manners for to interrupt me.'"



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San Francisco Looters. Searchers for Valuables Among the Ruins of the City.

From the San Francisco Chronicle. Looters are said to far outnumber the guards in the burned district, and it is believed that it may be necessary to release the first order to kill on sight any one without authority caught grubbing among the ruins. The crack of a sentry's rifle followed by the sight of a man tumbling face down in the ashes and lying still was found to be highly efficacious in deterring others from following his example.

It is reported that the greater part of the looters come from across the bay, carrying suit cases, telescope baskets, gunny sacks or anything that will conceal their loot. Pawn shops, jewelry stores and the establishments carrying the finer lines of bronzes and porcelain are the objective points of the looters, which leads to the conclusion that it is valuable and not meretricious for which they are searching. Some of the hand painted porcelain, having been subjected to great heat in the decoration, passed through the fire almost unscathed, and may readily be converted into cash. The ruins of the better class family hotels and Chinatown have proved fruitful to the thieves. These looters come across the bay in swarms, and it may be necessary to refuse entrance to the city to any one without a pass.

During the progress of the fire a number of merchants buried a part of their most valuable stocks in their basements, and it is for this the looters are searching. In some instances they have been successful, and many thousands of dollars' worth of jewelry and ornaments have found their way into their bags, to be sold later on the streets or displayed on curio stands. The arrival of reinforcements to the regular troops may permit the more thorough guarding of the burned district and compel the "lights" to remain in the streets.

A number of these same lights were prevented from entering upon the ruins of the Mark Hopkins hotel, and the San Francisco man and other ruins on Nob Hill, where they raided vigorously at the action of the guards.

## \$50,000 ON A BILLIARD SHOT.

JOHN H. SHULTS BET A FAMOUS HORSE ON HIS SKILL.

A Kentucky Horseman Wagered Another—Shults Won, but Generously Saved the Kentuckyan From Ruin—A Record Bet on a Single Play at Billiards.

"We are having a great rally among the lovers of billiards in New York just now," remarked a man who sat watching Shults make his record average in the recent tournament at Madison Square Garden, "and a lot of money will change hands before it is over; but I can tell you of a game of billiards which resulted in a bigger wager than all these latter ones put together."

"Furthermore, it was made on a single shot, and the stakes were in value close to \$50,000. The story was told to me by an eyewitness, who with another man was the only spectator of this high play with the ivory."

"Back in 1886, if my memory serves me, there was a breeding farm for trotters established on the Ocean Parkway in Brooklyn by John H. Shults. He purchased a large road house, also, and fitted it up as a residence. In one of the rooms he set up a billiard table to amuse himself and his friends during the long winter evenings."

"Among the out of town visitors to Parkville Farm, as it was called, was W. H. Wilson, who had a similar place in Kentucky. He was a big, rawboned man, fond of more sports than horse racing, with a reputation of being handy with a pack of cards as well as with a cue."

"With him was a veterinary surgeon from the Blue Grass region, and they were entertained in the royal fashion for which their host was noted. After a capital dinner, flanked by numerous cold quarters, the party adjourned to the billiard room for a smoke, and the Kentucky breeder was invited to try his skill against the master of the Brooklyn farm."

"He made a good showing and the game was a pretty close one. After a fairly good run, Wilson left the balls in a difficult lineup and far apart on the rail. As Mr. Shults stepped up for his innings his opponent said: 'You don't expect to count this time?'

"Yes, of course I do," was the reply. "That's an easy one."

"I'd like to bet you something you miss," said the Kentuckyan. "How much?" said his host. "Oh, let's make it a horse," said the visitor.

"Not long before Wilson had secured a valuable stallion in Persimmons, a son of the famous George Wilkes, to head his stud at Cynthiana, and when Mr. Shults said 'All right, Persimmons for me,' he was a bit startled, for that meant the bulk of his worldly chattels."

"He still thought he had a practical chance, however, and, moreover, envied the Brooklyn breeder the possession of that good sire, Panocost, for whom Shults had paid \$25,000 at auction a short time before. Here seemed the chance of a lifetime to land a big prize, so Wilson snapped at the suggestion, and promptly said: 'It's a go if you put Panocost up against my horse.'"

"So the big wager was made in a fifty, and Wilson, who now fancied he had a 'moral' on the other man's valuable trotter, suggested they put it in writing. That was agreeable to Mr. Shults, and a memorandum of the bet was duly drawn up and signed by both principals, with the veterinary surgeon and the superintendent of Parkville Farm as witnesses."

"Then the cool old gentleman with the white hair and mustache took up his cue, pulled it carefully and with a powerful push of an iron arm sent the ball spinning across from the object ball to the third one as if he were making a straight carry. Then he turned to his guest with a merry twinkle in his keen blue eye and found the latter propped back against the wall for support, looking as white about the gills as his own collar."

"What's the matter, Wilson?" said he. "I did—didn't think you could come within a yard of that shot," stammered the tall Kentuckyan, who saw ruin staring him in the face as the result of his sure thing proposition."

"That's all right, my boy," said his conqueror with a reassuring smile. "You're my guest and as I never missed a cross table shot like that it wouldn't be fair to take your horse. We'll have another bottle and call it off."

"Then Wilson came back to earth with a sigh of relief that could have been heard down at Coney Island, accepted the invitation like a man who had been on the water wagon for a year and tore up the memorandum as if it had been a death warrant."

"All the same, he really stood to win of lose a couple of pieces of horseflesh that were worth at least the \$50,000 I mentioned before—and that was on a single stroke of a cue at a billiard table. It's a true tale and surely a record breaker among bets of that kind."

Music by Prof. Piano.

From the Poughkeepsie News Press.

Prof. Henry Piano of Fishkill Landing has composed a waltz which he has designated as 'Mount Beacon Indiana.'